



MFC Technology presents **cost effective, non-chemical treatment** for industrial and commercial **Fuel, Oil & Water Systems**.

A variety of **fluid instability factors** cause the **formation of insipient solids, sediments, and deposits** that impact equipment performance and reliability in numerous applications.

The **FC Series** of fluid conditioners **reverses these processes, reducing maintenance and downtime, to increase productivity** and reduce **overall operating costs**.

APPLICATIONS

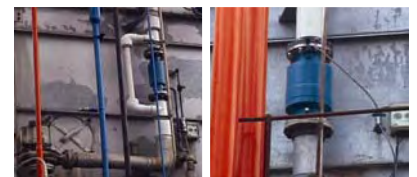
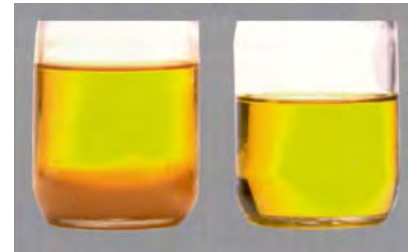
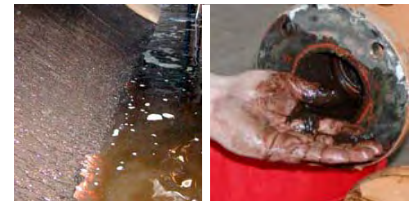
In **Diesel Fuel Systems**, less than optimal fuel quality leads to poor filterability and incomplete combustion causing excessive exhaust and particulate emissions. Symptoms of poor fuel quality are clogged filters, tank sludge, premature injector and injection pump failure, and insufficient RPM and engine output. Injector and pump damage is mostly due to the build up of asphaltene and other organic fuel component deposits of 5 micron and smaller. Algae-X Fuel Conditioning and Fuel Management Systems keep fuel clean and reduce the particle size of these organic compounds improving filtration, combustion and fuel stability.

In **Crude Oil production**, transportation and storage systems MFC (Magnetic Fuel Conditioning) technology is implemented to reduce, prevent and eliminate deposits of paraffin, asphaltene, scale, BS&W and tank high bottoms. MFC installations increase production flow, reduce downtime, extend maintenance intervals. In some instances the MFC prevents the necessity of mechanical or chemical treatment, the manual de-scaling of pumps and related equipment.

In **Storage Tanks & Pipelines**, the application of MFC technology enhances oil water separation, eliminates the need for costly toxic biocides and reduces drag in pipe lines. MFC systems significantly reduce corrosion and pitting, prevent and eliminate the formation of sludge and tank high bottoms and extend tank-cleaning intervals.

In **Lube Oil & Hydraulic Fluid** filtration and treatment equipment, MFC based recirculating systems (like FPS or STS) are implemented to improve the filterability, stability and service life of the oil. These systems significantly reduce maintenance & downtime, improving system reliability, extending replacement intervals of coalescer & filter elements.

In **Water systems** such as cooling towers, boilers and heat exchangers, calcium carbonate and other dissolved salts form scale deposits. The traditional approach to de-scaling and scale prevention has been the continuous use of costly chemicals, or acid treatment and the manual removal of scale deposits. In-line installations of MFC systems offer a cost effective, safe and environmentally sound alternative. Non-chemical MFC water treatment and de-scaling systems change and inhibit the formation of calcite, promoting the formation of another form of calcium carbonate crystals (aragonite). This material is not sticky, much smaller and easily removed during blow-down.



ALGAE-X[®] Total Fuel Management Systems

SPECIFICATIONS

The **FC Series of high capacity, high-pressure fluid conditioners** are designed and built to **customer specifications**. FC equipment ranges in size from 1/2" female or male thread connectors up to large diameter flanged spool pieces for pipelines and tank farms. Standard pressure ratings range from 150 PSI up to 3000 PSI.

The housing and inside flow channels of all standard FC units are made of 304 or 316 **stainless steel**. Larger MFC's for pipelines, tank farms and cooling towers can be built with a stainless steel interior and a steel housing. Standard magnetic circuitry is constructed with high-powered neodymium. FC Series is **shock and vibration proof**.

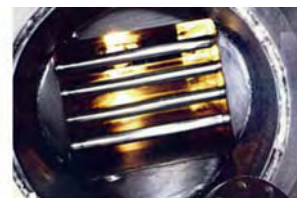
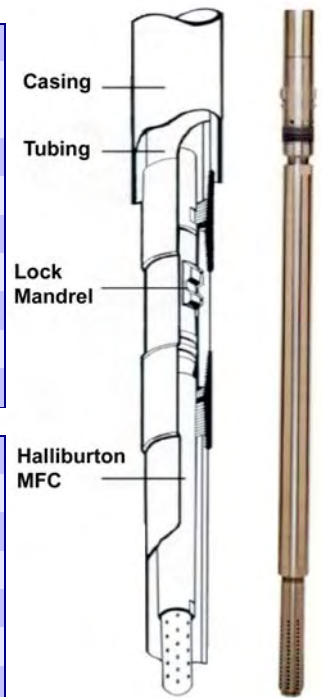
Data and specifications on pipe sizes and diameter, flow rates and operating pressures in the system are necessary information to determine the model, type and configuration of FC equipment for a particular application. For water and crude oil applications, we require information on the make up of the fluid, preferably in the form of a fluid analysis lab report.

INFORMATION TO DETERMINE FC SERIES DESIGN CRITERIA AND DIMENSIONS

Fuel, Oil, Crude Oil	Data Requirements
Application	Engine, generator, fuel forwarding pump, storage tank, pipeline, oil well, hydraulic system
Engine / Generator	Make, Model, hp or kW
Line Size	Fuel line size and thread (NPT, BSP) or flange
Flow Rate / Pressure	Flow rate in GPM, GPH, l/min, tons/h / pressure in the system
Tank Size	Number, capacity & dimensions of tanks
Pressure Drop	Max. allowable pressure drop at MFC installation point
Layout	Flow schematic or drawing, piping, tank diagram
Lifetime Warranty and Performance Guaranty	Made in the U.S.A.

Water	Data Requirements
Application	Boiler, heat exchanger, cooling tower, water supply, AC
Line Size	Line diameter and thread (NPT, BSP) or flange
Flow Rate / Pressure	Flow rate in GPM, GPH, l/min, tons/h / pressure in the system
Pressure Drop	Max. allowable pressure drop at MFC installation point
Layout	Flow schematic or drawing, piping diagram
Lifetime Warranty and Performance Guaranty	Made in the U.S.A.

Down Hole MFC for Oil Well



The **ALGAE-X[®] manual "Commercial and Industrial Fluid Treatment"** provides further information, standard questionnaires and examples of principle system schematics. For system design and additional information please contact us directly.

FC Systems can be **purchased or leased**.

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